

IN THE CLAIMS

Please amend claims 1, 4, 8, 10, 13, 19, and 24 as follows. In addition, please add new claims 29-33 as shown below.

1. (Currently Amended) A MEMS anchor system for securing a base of a MEMS device to a substrate, comprising:
a plurality of anchors securing the base of the MEMS device to the substrate, each anchor comprising a plurality of anchor legs, each anchor leg being attached at one end to the base of the MEMS device and attached at another end to the substrate, the plurality of anchor legs comprising a first number of anchor legs oriented along a first direction and a second number of anchor legs oriented along a second direction, the first number of anchor legs are stronger and longer than the second number of anchor legs.

C Claims 2-3 (Cancelled)

4. (Currently Amended) The MEMS anchor system of claim 31, wherein the first number of anchor legs orientated along the first direction have a lengths that isare at least twice the lengths of the second number of anchor legs orientated along the second direction.

5. (Original) The MEMS anchor system of claim 1, wherein the plurality of anchors are arranged in at least two rows, each row comprising at least two anchors.

6. (Original) The MEMS anchor system of claim 5, wherein each row comprises at least four anchors.

7. (Original) The MEMS anchor system of claim 1, wherein the plurality of anchors comprises at least eight anchors.

8. (Currently Amended) A MEMS apparatus, comprising:

a beam;

a base attached to one end of the beam;

a substrate; and

AD
a plurality of anchors securing the base to the substrate, each anchor comprising a plurality of anchor legs, each anchor leg being attached at one end to the base of the MEMS device and attached at another end to the substrate, the plurality of anchor legs comprising a first number of anchor legs oriented along a first direction and a second number of anchor legs oriented along a second direction, the first number of anchor legs are stronger and longer than the second number of anchor legs.

9. (Original) The MEMS apparatus of claim 8, wherein the plurality of anchors is located away from the end of the beam attached to the base.

10. (Currently Amended) The MES MEMS apparatus of claim 8, wherein the width of the base is greater than the width of the beam.

C Claims 11-12 (Cancelled) *J*

13. (Currently Amended) The MEMS anchor system of claim ~~12~~8, wherein the first number of anchor legs orientated along the first direction has a ~~same~~ lengths that is ~~are~~ at least twice the length of the second number of anchor legs orientated along the second direction.

14. (Original) The MEMS apparatus of claim 8, wherein the plurality of anchors are arranged in at least two rows, each row comprising at least two anchors.

15. (Original) The MEMS apparatus of claim 14, wherein each row comprises at least four anchors.

16. (Original) The MEMS apparatus of claim 8, wherein the plurality of anchors comprises at least eight anchors.

17. (Original) The MEMS apparatus of claim 8, further comprising a folded spring attaching the one end of the beam to the base.

18. (Original) The MEMS apparatus of claim 8, wherein the other end of the beam is free.


19. (Currently Amended) A MEMS apparatus, comprising:

a beam;

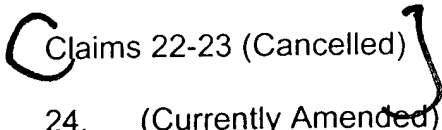
two bases, each base attached to one end of the beam;

a substrate; and

two sets of multiple anchors, each set of multiple anchors securing one of the two bases to the substrate, each anchor of the sets of multiple anchors comprising a plurality of anchor legs, wherein in a first set of multiple anchors, each anchor leg is attached at one end to a first base of the MEMS device and attached at another end to the substrate, and wherein in a second set of multiple anchors, each anchor leg is attached at one end to a second base of the MEMS device and attached at another end to the substrate, the plurality of anchor legs of the first and second sets of multiple anchors comprising a first number of anchor legs oriented along a first direction and a second number of anchor legs oriented along a second direction, the first number of anchor legs are stronger and longer than the second number of anchor legs.

 20. (Original) The MEMS apparatus of claim 19, wherein each set of multiple anchors is located away from the end of the beam attached to the respective base.

21. (Original) The MEMS apparatus of claim 19, wherein the width of each one of the bases is greater than the width of the beam.

 Claims 22-23 (Cancelled)


24. (Currently Amended) The MEMS anchor system of claim 23¹⁹, wherein the first number of anchor legs orientated along the first direction has a ~~have~~ lengths that ~~is~~ are at least twice the length of the second number of anchor legs orientated along the second direction.

25. (Original) The MEMS apparatus of claim 19, wherein each set of multiple anchors is arranged in at least two rows of anchors, each row comprising at least two anchors.

26. (Original) The MEMS apparatus of claim 25, wherein each row comprises at least four anchors.

27. (Original) The MEMS apparatus of claim 19, wherein each set of multiple anchors comprises at least eight anchors.

28. (Original) The MEMS apparatus of claim 19, further comprising a folded spring attaching one end of the beam to one of the two bases.

 29. (New) A MEMS anchor system for securing a base of a MEMS device to a substrate, comprising:

a plurality of anchors securing the base of the MEMS device to the substrate, each

anchor further comprising a plurality of anchor legs, each anchor leg being attached at one end to the base of the MEMS device and attached at another end to the substrate, wherein the plurality of anchor legs comprises a first number of anchor legs that are orientated along a first direction, a second number of anchor legs that are orientated along a second direction, and the first number of anchor legs are thicker and longer than the second number of anchor legs.


30. (New) The MEMS anchor system of claim 29, wherein the first number of anchor legs are oriented parallel to the direction of the beam.

31. (New) The MEMS anchor system of claim 29, wherein the first number of anchor legs are oriented perpendicular to the direction of the beam.

32. (New) A method of manufacturing a MEMS device comprising the steps of:
providing a substrate;
depositing a sacrificial layer on the substrate;
patterning a plurality of rectangular-shaped vias in the sacrificial layer to expose the surface of the substrate within the vias;
depositing a metal layer on the sacrificial layer and vias; and
removing the sacrificial layer.

33. (New) The method of claim 32, wherein the metal layer is deposited using a techniques selected from the group consisting of electroplating, sputtering, and e-beam deposition.

34. (New) A MEMS anchor system for securing a base of a MEMS device to a substrate, comprising:



a plurality of anchors securing the base of the MEMS device to the substrate, each anchor comprising a plurality of anchor legs, each anchor leg being attached at one end to the base of the MEMS device and attached at another end to the substrate, the plurality of anchor legs having a geometric shape selected from the group consisting of hexagonal, octagonal, elliptical, crosses, and circles.
